

IN THE CLAIMS:

1. (Currently Amended) A substrate cleaning system comprising:

a system body \pm capable of being sealed;

a loading/unloading booth A comprising a substrate carry-in section ~~Aa~~ in which a plurality of substrates are stocked and standby to be carried in before cleaning treatment is applied to them and a substrate carry-out section ~~Ab~~ in which a plurality of substrates are stocked and standby to be carried out after cleaning treatment was applied to them;

a processing booth C provided with at least one sheet-type substrate cleaning chamber \pm in which a cleaning treatment can be applied to a plurality of substrates by a plurality of cleaning solutions; and

B4 a robot booth B provided with a transport robot for transporting the substrates one by one between the processing booth C and the loading/unloading booth A ;

wherein the respective booths are partitioned by partition walls ~~each having a required minimum cross sectional area;~~

the loading/unloading booth and the robot booth are respectively installed on opposite sides of the system body;

the robot booth is sandwiched between the loading/unloading booth and the processing booth; and

the loading/unloading booth has openings which are openable to an operating space provided outside the system body.

Claim 2 (Canceled)

3. (Currently Amended) The substrate cleaning system according to Claim 1 ~~or 2~~, wherein a substrate holding section is provided for holding carriers arranged such that the substrates to be stocked in the carry-in section ~~Aa~~ and carry-out section ~~Ab~~ of the loading/unloading booth ~~A~~ are aligned horizontally with a given alignment pitch in a vertical direction, and clean air flowing inside the loading/unloading booth ~~A~~ ~~directs~~ is directed from the carry-in section ~~Aa~~ to the carry-out section ~~Ab~~.

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4. (Currently Amended) The substrate cleaning system according to Claim 1 ~~or 2~~, wherein the carry-in section ~~Aa~~ and the carry-out section ~~Ab~~ have substrate holding sections ~~60~~ for holding carriers in which a plurality of substrates are stocked in a horizontal state with a given alignment pitch in a vertical direction, and an elevation positioning unit ~~61~~ for positioning the substrates to be carried in or out from the carriers ~~56~~.

5. (Currently Amended) The substrate cleaning system according to Claim 4, wherein each substrate holding section ~~60~~ has at least two holding tables ~~60a, 60a~~ which hold each carrier ~~56~~ and are disposed vertically with a given interval.

6. (Currently Amended) The substrate cleaning system according to Claim 1 ~~or 2~~, wherein the transport robots ~~70~~ in the robot booth ~~B~~ are formed of a twin arm robot each provided with a

pair of hand sections 70a, 70b movable vertically and horizontally, and wherein one of the hand sections transports the substrate before they are subjected to a cleaning treatment while the other hand section transports the substrate after they are subjected to the cleaning treatment.

Claim 7 (Canceled)

B4 8. (Currently Amended) The substrate cleaning system according to Claim 1 ~~or 2~~, wherein the robot booth B has a substrate reversing unit 71 which turns each substrate upside down on its front and back face.

9. (Currently Amended) The substrate cleaning system according to Claim 1 ~~or 2~~, wherein ~~corrosion resistance coating treatment is applied to~~ the inner wall surface of the processing booth has a corrosion resistance coating treatment thereon, and the other wall side of the processing booth has ~~a with~~ vinyl chloride resin and oxidation resistance painting treatment ~~is applied to thereon the other wall side of the processing booth C.~~

Claim 10 (Canceled)

11. (Currently Amended) The substrate cleaning system according to Claim ~~10~~ 14, wherein the chamber body 80 is a sealed container provided with an openable substrate carry-in gate 90.

12. (Currently Amended) The substrate cleaning system according to Claim ~~10~~ 14, wherein the chamber body ~~80~~ comprises a chemical supply section ~~91~~ for supplying cleaning solution onto a substrate surface supported by the substrate rotating unit ~~81~~, an inert gas supply section ~~92~~ for supplying inert gas so as to discharge and exchange cleaning solution, and a drain section provided in each processing bath so as to drain cleaning solution or inert gas in each processing bath.

13. (Re-presented - formerly dependent claim 7) A substrate cleaning system comprising:
a system body capable of being sealed;
a loading/unloading booth comprising a substrate carry-in section in which a plurality of substrates are stocked and standby to be carried in before cleaning treatment is applied to them and a substrate carry-out section in which a plurality of substrates are stocked and standby to be carried out after cleaning treatment was applied to them;

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a processing booth provided with at least one sheet-type substrate cleaning chamber in which a cleaning treatment can be applied to a plurality of substrates by a plurality of cleaning solutions;
and

a robot booth provided with transport robots for transporting the substrates one by one between the processing booth and the loading/unloading booth;

wherein the respective booths are partitioned by partition walls;

the transport robots in the robot booth are formed of a twin arm robot each provided with a pair of hand sections, movable vertically and horizontally;

one of the hand sections transports the substrate before they are subjected to a cleaning treatment while the other hand section transports the substrate after they are subjected to the cleaning treatment; and

wherein each substrate holding section provided at the tip end of each hand section of the transport robot has a soft landing type supporter for transporting and supporting the lower surface of each substrate.

B4 14. (Re-presented - formerly dependent claim 10) A substrate cleaning system comprising:
a system body capable of being sealed;

a loading/unloading booth comprising a substrate carry-in section in which a plurality of substrates are stocked and standby to be carried in before cleaning treatment is applied to them and a substrate carry-out section in which a plurality of substrates are stocked and standby to be carried out after cleaning treatment was applied to them;

a processing booth provided with at least one sheet-type substrate cleaning chamber in which a cleaning treatment can be applied to a plurality of substrates by a plurality of cleaning solutions;
and

a robot booth provided with a transport robot for transporting the substrates one by one between the processing booth and the loading/unloading booth;

wherein the respective booths are partitioned by partition walls; and

BY wherein a sheet-type substrate cleaning chamber in the processing booth is provided with a plurality of circular processing baths which are aligned vertically, and comprises a chamber body which moves vertically, and a substrate rotating unit which is disposed concentrically with the chamber body at the center and rotates a piece of substrate horizontally while supporting it horizontally, and wherein the substrates supported by the substrate rotating unit and the circular processing baths are positioned when the chamber body moves up and down vertically.
